

- HOT MIX ASPHALT PLANTS -

APEN INSTRUCTIONS

This document is provide to help assist the applicant in understanding the questions identified in the Air Pollutant Emission Notice (APEN) for hot mix asphalt facilities. For additional resources regarding the permit processing of hot mix asphalt plants, please consult CDPHE's hot mix asphalt web page at www.cdphe.state.co.us/ap/stationary/hotmix.asp.

SECTION 1: General Information

Are you requesting a portable or stationary source permit?

A portable source permit allows the permittee to relocated the source to a new location without having to modify the permit. If your facility will be relocating at a minimum of once every two years, then it is recommended that you request a portable source permit.

A stationary source permit is required for any facility which remains at a given location for more than 2 consecutive years. If you have a facility that has remained at the same location for greater than 2 years, you must request a stationary source permit.

An example site map is provided below

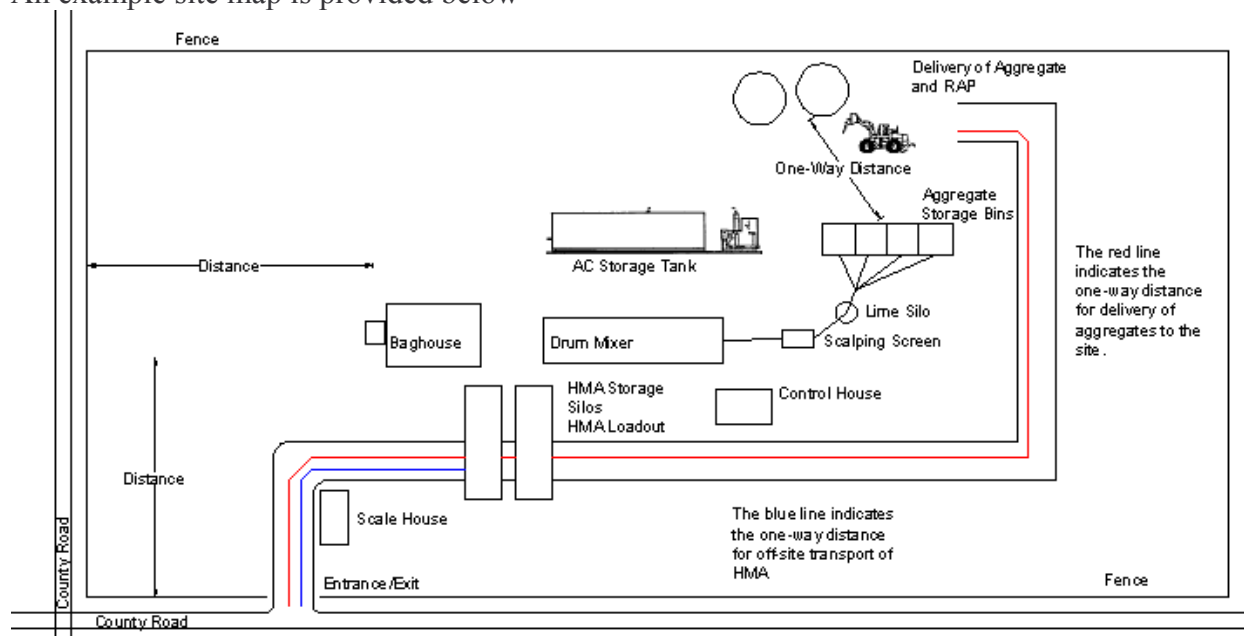


Figure 1

The following information must be provided on the site map:

1. Location of all pieces of equipment in relative scale
2. Specific distance from the control equipment to the fence.
3. All haul roads and distances designated
4. Nearest public roads
5. Other sources of air pollution on-site (concrete batch plant, generator, etc.)
6. Property boundary and fenceline

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Was this hot mix asphalt plant constructed, modified, or reconstructed after June 11, 1973?

For the definitions of constructed, modified, or reconstructed, please consult with 40 C.F.R. Part 60, Subpart I (New Source Performance Standards for Hot Mix Asphalt Plants).

Seasonal Throughput (% of annual)

If you are a synthetic minor source (see PS Memo 97-3), the Division will impose short-term quarterly limits in your permit based on the percentages provided here.

SECTION 2: Equipment Information

Plant Type:

See [EPA's AP-42, Chapter 11.1](#) for a description of the different plant types.

Plant Design Rate:

This is the maximum hourly production rate of hot mix asphalt for the plant and is typically indicated in the manufacturer's specification.

Max Burner Design Rate:

This is the maximum heat rate of drum burner and is typically indicated in the manufacturer's specification.

Make, Model, & Serial Nos.

If a model or serial number does not exist for a specific piece of equipment, it is acceptable to put "n/a" to indicate that it isn't available. The applicant should also provide an explanation of why the number is not available.

SECTION 3: Equipment & Product Information

Aggregate mix:

If you check *virgin asphalt* then you are indicating that the plant does not produce hot mix asphalt by using recycled asphalt product (RAP) to offset aggregate.

If you check *contains recycled asphalt product*, then you should indicate the maximum amount of RAP that potentially would be used in mix designs at your plant.

Production of Hot Mix Asphaltic Concrete:

Most information provided here will be used for permit limitations.

- For the HMA temperature range, the minimum and maximum values must be provided.
- For the requested annual permit limit, this is the amount of HMA that the applicant requests as their permit limit. Typically, the applicant will enter a value which

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represents the highest potential annual production that they expect in the next 5 years (the term of the APEN).

- For the requested daily permit limit, this value is used to determine whether the source is in compliance with the National Ambient Air Quality Standards (NAAQS). If this value is equal to the plants maximum hourly design rate multiplied by 24 hours and using this value the Division determines that the NAAQS are being met, then this value will not be a permit limitation. If this value is less than maximum hourly design rate multiplied by 24 hours, then a permit limitation is needed to demonstrate that the facility is in compliance with the NAAQS.
- Actual Level From Calendar Year: This is the annual production of HMA from the last most representative year of operation. For new sources which have not operated previously in the state, this value may be left blank or filled in for the actual amount of production expected during the first year of production. For existing operations, if this value is left blank, then it is assumed that the actual production level is equal to the permitted production level.
- Data Year: The year for which the above information is representative of.

Lime or mineral filler storage silos:

- For the requested annual permit throughput, this is the amount of lime and mineral filler that the applicant will use based on their as their HMA permit limit. Typically, the applicant will enter a value which represents the highest potential annual production that they expect in the next 5 years (the term of the APEN).

Fuel Information for Hot Oil Heater:

Design Heat Rate: This is the maximum heat rate produced by the heater for the asphalt cement storage tanks. This value should represent the sum of all the heat rates for each tank.

SECTION 4: Stack Information

Information in this section may be found in the manufacture's specifications or in a performance test report.

SECTION 5: Fuel Information

This section identifies the primary fuel type for the unit as well as any potential backup fuels. By checking additional primary fuels or a backup fuel(s), the Division may require a performance test to be performed while combusting the fuel type.

SECTION 6: Air Pollution Emission Information (optional)

This section allows the applicant to submit their estimate of the emissions generated from their operation. If this section is completed, the applicant should also provide the calculations they performed to estimate their emissions.

SECTION 7: Fugitive Dust Emission Sources

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On-site moving of aggregate from storage piles to storage bins. This subsection is used to estimate fugitive dust emissions generated from loader traffic during the activity of transferring aggregate from storage piles to the storage bins.

Transport of aggregate to the site from an off-site location (if the facility is not located at an aggregate mine). This subsection is used to estimate fugitive dust emissions generated by the vehicles delivering aggregate to the site. This would occur if the plant was to locate to a site where aggregate was not being mined and had to be transported in from an off-site location.

Removal of hot mix asphalt from the site.

This subsection is used to estimate the fugitive dust emissions generated by vehicles removing HMA from the site.

Haul Vehicle Capacity:

The average amount of aggregate moved per trip by the transport vehicle. This value should be reported in tons, however may be provided as cubic yards.

Haul Vehicle Empty Weight:

The vehicle weight when no aggregate is being transferred.

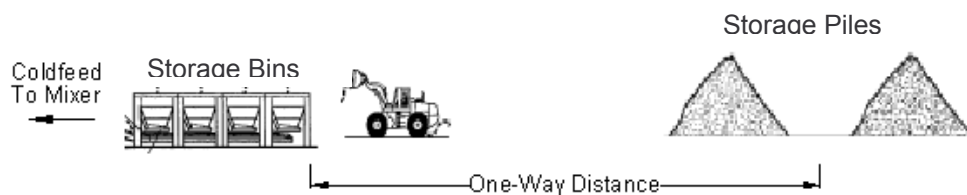
Max Number of Trips Per Day:

The number of trips that a vehicle type will make during a day with maximum production from the plant. This number may be calculated by dividing the maximum amount of moved in a day by the Haul Vehicle Capacity.

Haul Road Length (average one-way):

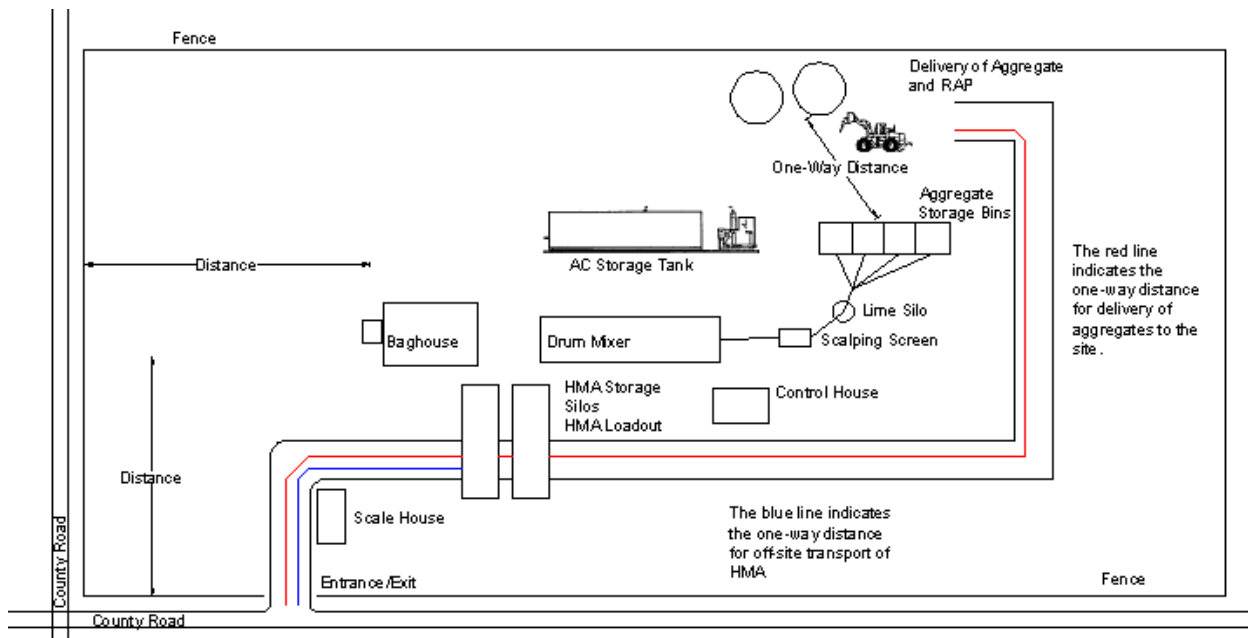
See the below diagrams for the respective distance. For portable facilities, this distance should represent the maximum length that would exist at any potential location.

For Loader traffic:



For off-site transport of aggregate to the site and transport of HMA off-site. Refer to the red and blue lines on sample site map below. For portable facilities, these distances should represent the maximum length that would exist at any potential location. In addition, for portable plants that locate to a site where the HMA produced will be used on-site, the haul road length should be the average distance that the haul vehicles will move the HMA from the HMA loadout point to location of final placement of HMA.

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Posted Speed Limit on Haul Road:

As indicated by the question, this is the maximum posted speed limit on the loader haul road. If no speed limit signs are posted, the applicant should provide the average speed on the haul road.

Air Pollution Controls for the On-Site Haul Road:

The applicant should check (list) any fugitive dust control measures to be implemented on the haul road. For portable facilities, the applicant shall list the control measures that will be used at every location they relocate. These control measures will be written into the permit conditions.

In addition, the owner or operator of any new or existing haul road which has vehicle traffic exceeding 40 haul vehicles or 200 total vehicles per day (averaged over a 3-day period) from which fugitive emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions. Reference: Regulation No. 1, Section III.D

Paved Surface:

Either by concrete or asphaltic concrete.

Graveled Surface:

Refer to U.S. Department of Transportation *Gravel Roads Maintenance and Design Manual*

Types of Chemical Stabilizers: (this information is found in U.S. Department of Transportation *Gravel Roads Maintenance and Design Manual*)

Chlorides: These are the most commonly used products across the country. They fall into two categories: Calcium Chloride in flake or liquid form and Magnesium Chloride generally in

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liquid form. Calcium and Magnesium Chloride can be very effective if used properly. They are hygroscopic products which, in simplest terms, means they draw moisture from the air and keep the road surface constantly damp. They are reasonably simple to use.

Resins (chemical binder): These are products available under various commercial names. The basic composition is lignin sulfonate which is a by-product of the pulp milling industry. The product is sometimes called “tree sap” in the field. These products work best when incorporated into the surface gravel. They provide cohesion to bind the soil particles together.

Petroleum-based Products (chemical binder): Products such as chip sealants provide cohesion to bind the soil particles together.

Road Fabrics: Suitable for haul roads which experience a low volume of traffic.

Soybean Oil (chemical binder): This product is known technically as Acidulated Soybean Oil Soapstock. It is a by-product of the caustic refining process of soybean oil. It is a biodegradable material that has many of the characteristics of a light petroleum-based oil. It will penetrate a gravel surface and provide a light bonding of the gravel that effectively reduces dust when it is used properly.

Watering:

As Needed: Defined as watering will be implemented only when the fugitive emission guidelines of Regulation No. 1.

Systematic: The applicant should specify the minimum frequency that water will be applied each day (excluding days where natural precipitation occurs). If this frequency varies by season, the applicant must submit a separate document outlining their watering schedule.

If you have any questions, the following resources are available:

Small Business Assistance Program:

Website – www.cdphe.state.co.us/ap/sbap.asp

Asphalt Guidance Documents:

- [Overview of Air Regulations: Surface Mining, Concrete Batch Plants, and Hot Mix Asphalt](#)
- [Decision Support System for New Source Performance Standard \(NSPS\) Subpart I - Exit this site](#)
- [General Information on NSPS](#)

Contacts:

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Website – www.cdphe.state.co.us/ap/conperm.asp

Permitting of Asphalt Plants Webpage – www.cdphe.state.co.us/ap/conperm/asphalt.asp